User's manual (short)

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NVIP-3DN7020D/IR-2P

http://www.e-camere.ro/Camere-Supraveghere-Ip/Novus/NVIP-3DN7020D-IR-2P

IMPORTANT SAFEGUARDS AND WARNINGS

EMC (2004/108/EC) and LVD (2006/95/EC) Directives

CE Marking

Our products are manufactured to comply with requirements of the following directives and national regulations implementing the directives:

- Electromagnetic compatibility EMC 2004/108/EC.
- Low voltage LVD 2006/95/EC with further amendment. The Directive applies to electrical equipment designed for use with a voltage rating of between 50VAC and 1000VAC as well as 75VDC and 1500VDC.

WEEE Directive 2002/96/EC

Information on Disposal for Users of Waste Electrical and Electronic Equipment

This appliance is marked according to the European 1000VAC Directive on Waste Electrical and Electronic Equipment (2002/96/EC) and further amendments. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.
The symbol on the product, or the documents accompanying the product, indicates that this appliance may not be treated as household waste. It shall be handed over to the applicable collection point for used up electrical and electronic equipment for recycling purpose. For more information about recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.

RoHS Directive 2002/95/EC

Out of concern for human health protection and friendly environment, we assure that our products falling under RoHS Directive regulations, regarding the restriction of the use of hazardous substances in electrical and electronic equipment, have been designed and manufactured in compliance with the above mentioned regulations. Simultaneously, we claim that our products have been tested and do not contain hazardous substances whose exceeding limits could have negative impact on human health or natural environment

Information
The device, as a part of professional CCTV system used for surveillance and control, is not designed for self installation in households by individuals without technical knowledge.

Excluding of responsibility in case of damaging data on a disk or other devices:
The manufacturer does not bear any responsibility in case of damaging or losing data on a disk or other devices during device operation.

WARNING!
PRIOR TO UNDERTAKING ANY ACTION THAT IS NOT DESCRIBED FOR THE GIVEN PRODUCT IN USER'S MANUAL AND OTHER DOCUMENTS DELIVERED WITH THE PRODUCT, OR IF IT DOES NOT ARISE FROM THE USUAL APPLICATION OF THE PRODUCT, MANUFACTURER MUST BE CONTACTED UNDER THE RIGOR OF EXCLUDING THE MANUFACTURER'S RESPONSIBILITY FOR THE RESULTS OF SUCH AN ACTION.

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IMPORTANT SAFEGUARDS AND WARNINGS

WARNING!

THE KNOWLEDGE OF THIS MANUAL IS AN INDESPENSIBLE CONDITION OF A PROPER DEVICE OPERATION. YOU ARE KINDLY REQUSTED TO FAMILIRIZE YOURSELF WITH THE MANUAL PRIOR TO INSTALLATION AND FURTHER DEVICE OPERATION.

WARNING!

USER IS NOT ALLOWED TO DISASSEMBLE THE CASING AS THERE ARE NO USER-SERVICEABLE PARTS INSIDE THIS UNIT. ONLY AUTHORIZED SERVICE PERSONNEL MAY OPEN THE UNIT

INSTALLATION AND SERVICING SHOULD ONLY BE DONE BY QUALIFIED SERVICE PERSONNEL AND SHOULD CONFORM TO ALL LOCAL REGULATIONS

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1. Prior to undertaking any action please consult the following manual and read all the safety and operating instructions before starting the device.
2. Please keep this manual for the lifespan of the device in case referring to the contents of this manual is necessary;
3. All the safety precautions referred to in this manual should be strictly followed, as they have a direct influence on user's safety and durability and reliability of the device;
4. All actions conducted by the servicemen and users must be accomplished in accordance with the user's manual;
5. The device should be disconnected from power sources during maintenance procedures;
6. Usage of additional devices and components neither provided nor recommended by the producer is forbidden;
7. You are not allowed to use the camera in high humidity environment (i.e. close to swimming pools, bath tubs, damp basements);
8. Mounting the device in places where proper ventilation cannot be provided (e. g. closed lockers etc.) is not recommended since it may lead to heat build-up and damaging the device itself as a consequence;
9. Mounting the camera on unstable surface or using not recommended mounts is forbidden. Improperly mounted camera may cause a fatal accident or may be seriously damaged itself. The camera must be mounted by qualified personnel with proper authorization, in accordance with this user's manual.
10. Device should be supplied only from a power sources whose parameters are in accordance with those specified by the producer in the camera technical datasheet. Therefore, it is forbidden to supply the camera from a power sources with unknown parameters, unstable or not meeting producer's requirements;

Due to the product being constantly enhanced and optimized, certain parameters and functions described in the manual in question may change without further notice. We strongly suggest visiting the www.novuscctv.com website in order to access the newest manual

Data included in the following user's manual is up to date at the time of printing. AAT Holding Sp z o.o. holds exclusive rights to modify this manual. The producer reserves the rights for device specification modification and change in the design without prior notice.

http://www.e-camera.pl/kamere-sigurnosne-ip/Novus/NVIP-3DN7020D-IR-2P

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1. FOREWORD INFORMATION

1.1. General Characteristics

- Imager resolution: 3.0 megapixels
- Mechanical IR cut filter, IR operation capability
- Min. Illumination from 0.02 lx/F=1.2 – B/W DSS (0 lx with IR LED on)
- Wide Dynamic Range (WDR) for enhanced image quality in diverse light conditions
- Digital Slow Shutter (DSS)
- Digital Noise Reduction (DNR)
- Aspherical lens with auto D-type iris f=2.8~12 mm
- Built-in 24 LED illuminator
- Privacy zones: 5
- Alarm input and output
- Compression: H.264, M-JPEG
- Max video processing resolution: 2048 x 1536
- Quadruple streaming: compression, resolution, speed and quality defined individually for each video stream
- RTP/RTSP protocol support for video transmission
- Pre & post-alarm functions
- Hardware motion detection
- Built-in webserver: camera configuration through the website
- MicroSD/SDHC card support
- Wide range of responses to alarm events: e-mail with attachment, saving file on FTP server, triggering alarm output, saving file on SD/SDHC card, HTTP notification
- Network protocol support : Onvif (2.0), HTTP, TCP/IP, IPv4/v6, UDP, HTTPS, Multicast, FTP, DHCP, DDNS, NTP, RTSP, RTP, UPnP, SNMP, QoS
- Software: NMS (NOVUS MANAGEMENT SYSTEM) for video recording, live monitoring, playback and remote IP devices administration
- Power supply: 12VDC, 24VAC, PoE (Power over Ethernet)

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FOREWORD INFORMATION

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1.2. NVIP-3DN7020D/IR-2P specification

Model	NVIP-3DN7020D/IR-2P
Pick-up Element	1/2.8", 3M CMOS
Imager Resolution	3 megapixels
Min. Illumination	Color: 0.2 lx / F 1.2 (DSS), B/W: 0.02 lx / F 1.2 (DSS) IR: 0lx
Electronic Shutter	Auto / Manual (1 ~ 1/10 000 s)
Digital Slow Shutter (DSS)	Up to 1 s
Wide Dynamic Range (WDR)	Lo /Mid /Hi / Off
White Balance	Auto / ATW / With saved reference value / Manual (RGB)
Back Light Compensation (BLC)	On /Off
Day/Night Switching	Auto / Manual / Light sensor / Smart
Lens type	Aspherical auto iris DC: f=2.8 ~ 12 mm (F1.2)
Angle of View (H)	101° - 34 °
Image function	DNR – digital noise reduction
Resolution	2048 x 1536, 1920 x 1080, 1280 x 1024, 1280 x 720, 1024 x 768, 800 x 600, 720 x 576, 640 x 480, 352 x 288
Frame Rate	Up to 15 fps for 2048 x 1536, Up to 30 fps for 1920 x 1080 and lower resolution
Multi Streaming	4 streams
Video Compression	H.264/M-JPEG
Audio Compression	G.711 / G.726
Motion Detection	Hardware
System reaction to alarm event	E-mail with attachment, saving file on FTP, saving file to micro SD card, alarm output activation, HTTP notification
Pre/Post Alarm	Pre-alarm: up to 20 frame of picture or 3sec Post-alarm: up to 20 frame of picture or 9999sec
Video Saving Files	AVI(SD card), JPEG(FTP)
Time Synchronization	Automatic time synchronization with NTP server
Network Protocols Support	Onvif (2.0), HTTP, TCP/IP, IPv4/v6, UDP, HTTPS, Multicast, FTP, DHCP, PPPoE, DDNS, NTP, RTSP, RTP, UPnP, SNMP, QoS
Software	NMS
Security	Password protected camera access and its configuration, HTTPS, IP filtering, IEEE 802.1X
Privacy Zones	5
Audio Input	1 x (Pin terminal block)
Audio Output	1 x (Pin terminal block)
Alarm Input	1, (NO/NC)
Alarm Output	1, electronic relay galvanically isolated, 0.1A, 30V AC/DC
External Ports	1 x Ethernet RJ-45, 10/100 Mbit/s, 1x microSD/SDHC
IR LED	LED - 24 pcs
IR effective range	25m
Enclosure	Plastic, white
Power Supply	12V DC/ 24VAC/ PoE (IEEE 802.3af)
Power Consumption	3.8 W, 5.3 W (IR on)
Operating Temperature	-10°C ~ 50°C
Dimensions (mm)	⌀ 117mm x 90 h
Weight	370 g

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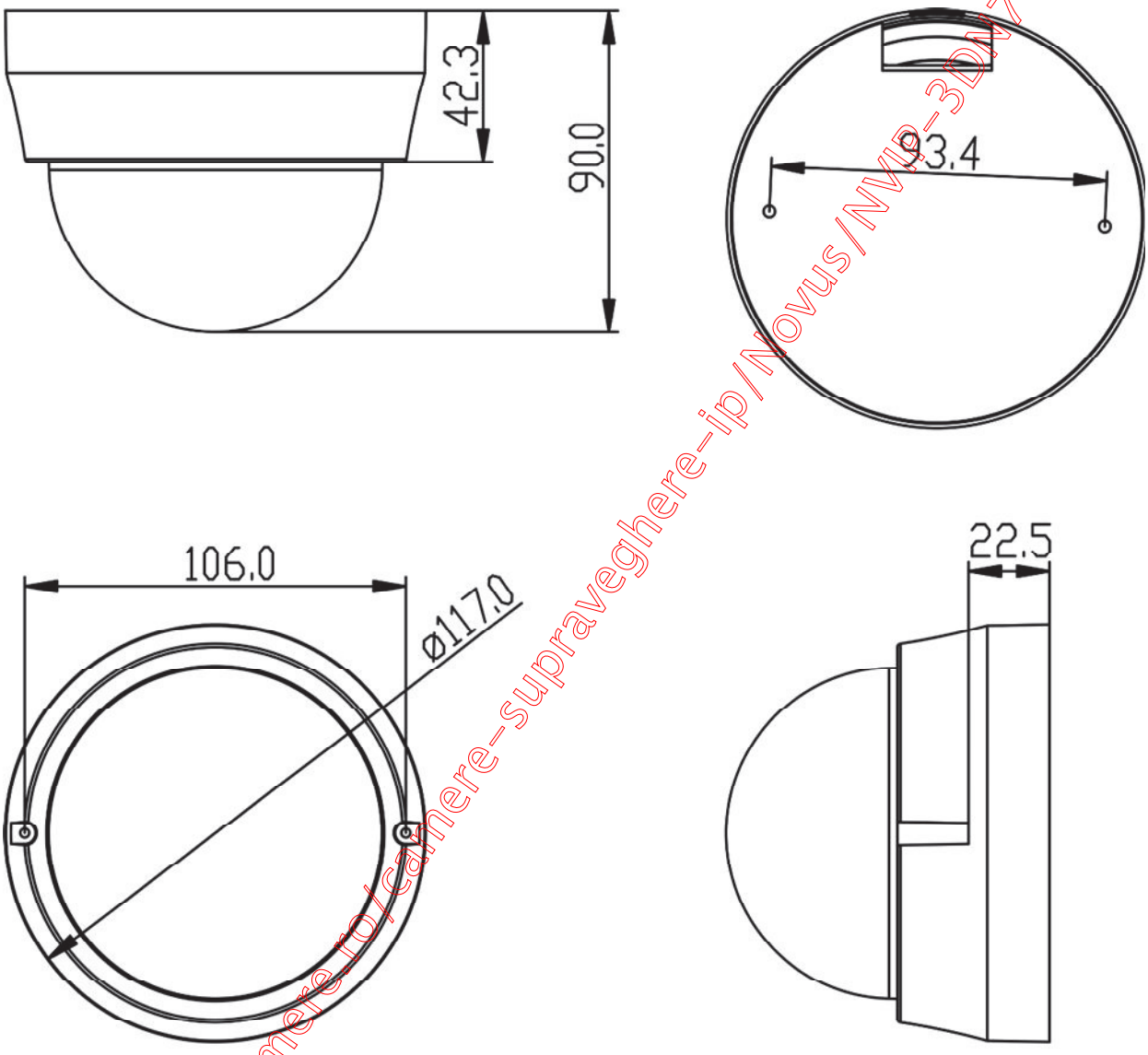
1.3. Camera dimensions



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FOREWORD INFORMATION

1.4. Package contents

After you open the package make sure that the following elements are inside:

- IP camera
- Power terminal block
- Accessories bag
- Short version of user's manual
- CD containing manual and software

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If any of this elements has been damaged during transport, pack all the elements back into the original box and contact your supplier for further assistance.

CAUTION!
If the device was brought from a location with lower temperature, please wait until it reaches the temperature of location it is currently in. Turning the device on immediately after bringing it from a location with lower ambient temperature is forbidden, as the condensing water vapour may cause short-circuits and damage the device as a result.

Before starting the device familiarize yourself with the description and the role of particular inputs, outputs and adjusting elements that the device is equipped with.

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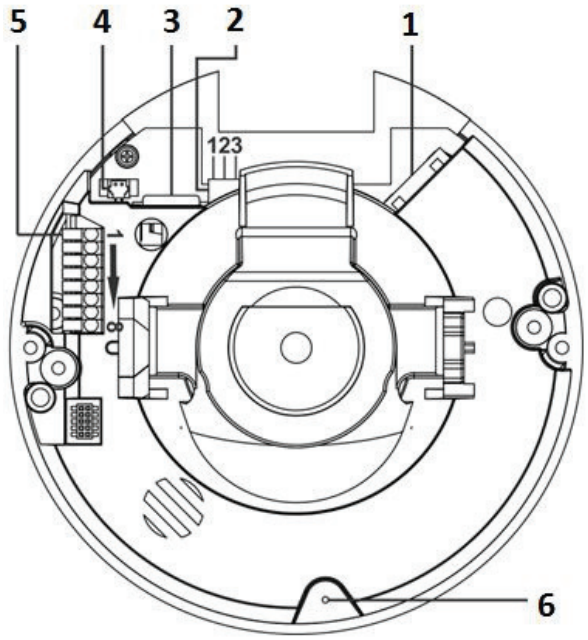
2. START-UP AND INITIAL IP CAMERA CONFIGURATION

2.1. Description of connectors and control tools

NVIP-3DN7020D/IR-2P



1. Port Ethernet 100 Mb/s (RJ-45 connector)
2. Power socket

Power socket	12VDC	24VAC
1	+12V	24V(+)
2	Not connected	Earth ground
3	- (GND)	24V(-)

3. MicroSD socket
4. Analog video output
5. Alarm input/output, audio input/output
6. Reset button
7. Light Sensor
8. Zoom adjustment
9. Focus adjustment

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START-UP AND INITIAL CAMERA CONFIGURATION

2.2. NVIP-3DN7020D/IR-2P mounting

To mount a camera please follow the instructions below:

- Unscrew the dome and camera cover from the camera
- Taking holes at the bottom of the camera's base as a pattern, please mark the drilling holes for screws and cables (using a punch, for example).
- Drill holes, in accordance with camera's base hole placement.
- Drill cable hole in the mounting place.
- Mount the camera base using included screws.
- Connect the power supply using the power terminal block, according to the table in 2.1. chapter.
- Point the camera to a desired scene.
- Adjust zoom and focus using zoom and focus adjustment screws.
- Put dome and camera cover onto the base of the camera and secure it using screws.

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START-UP AND INITIAL CAMERA CONFIGURATION

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2.3. Starting the IP camera

To run NOVUS IP camera you have to connect ethernet cable between camera and network switch with PoE support (IEEE 802.3af).

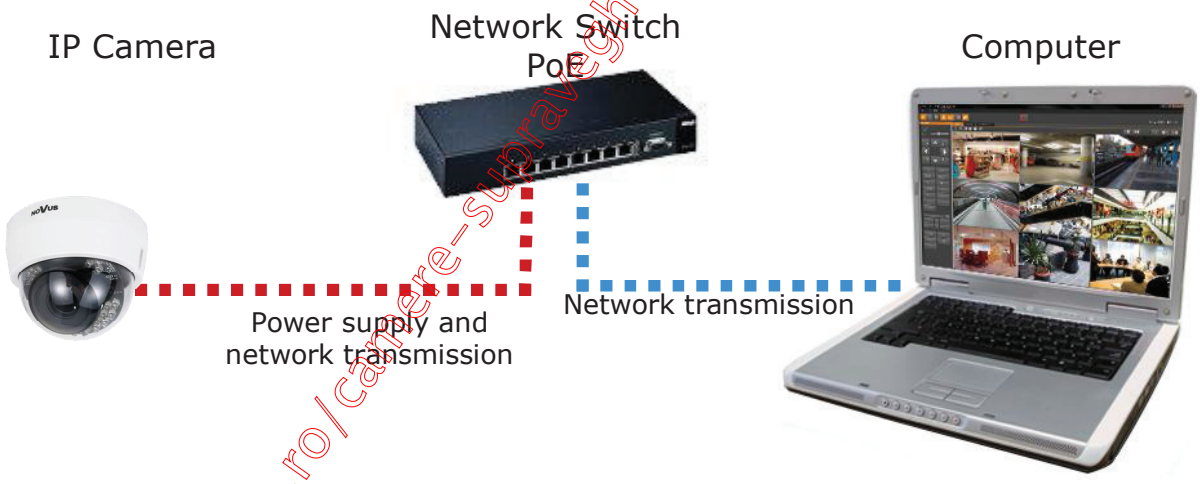
You can also connect it directly via power supply adapter with parameters compatible with camera power supply specification.

After connecting power supply green LED should light on. Initialization process is then started which takes about 30 seconds. You can then proceed to connect to the camera via web browser.

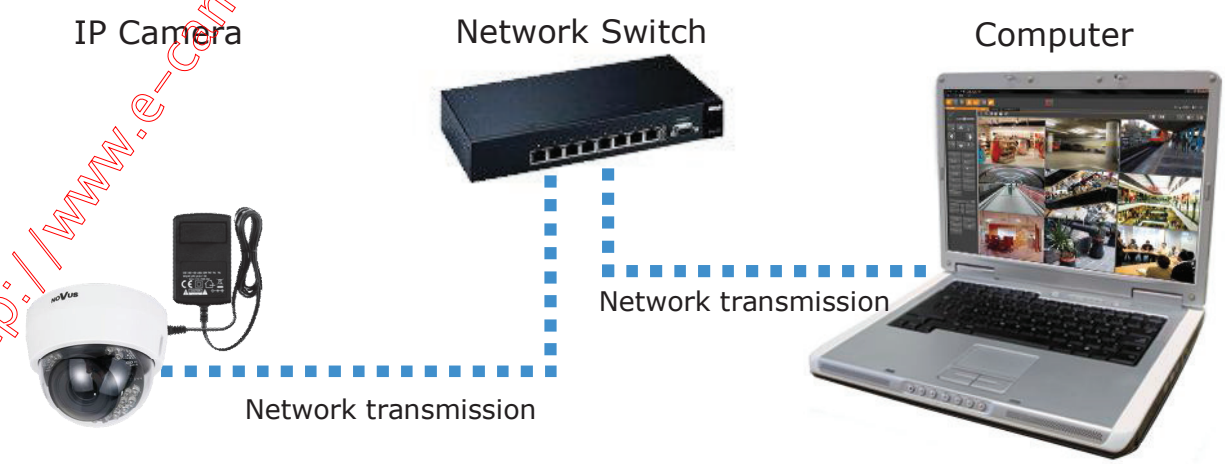
If the connection is successfully established orange LED blinks with a frequency proportional to the quantity of data sent. Connecting via web browser is then possible. If connection isn't established (the network cable is disconnected) green and orange LEDs aren't active, solid light means that network connection is ok but camera doesn't receive or send any data, with possible PC network settings error.

The recommended way to start an IP camera and perform its configuration is a connection directly to the network switch which is not connected to other devices. To obtain further information about network configuration parameters (IP address, gateway, network mask, etc.) please contact your network administrator.

- Connection utilising network switch with PoE support



- Connection utilising external power supply and network switch



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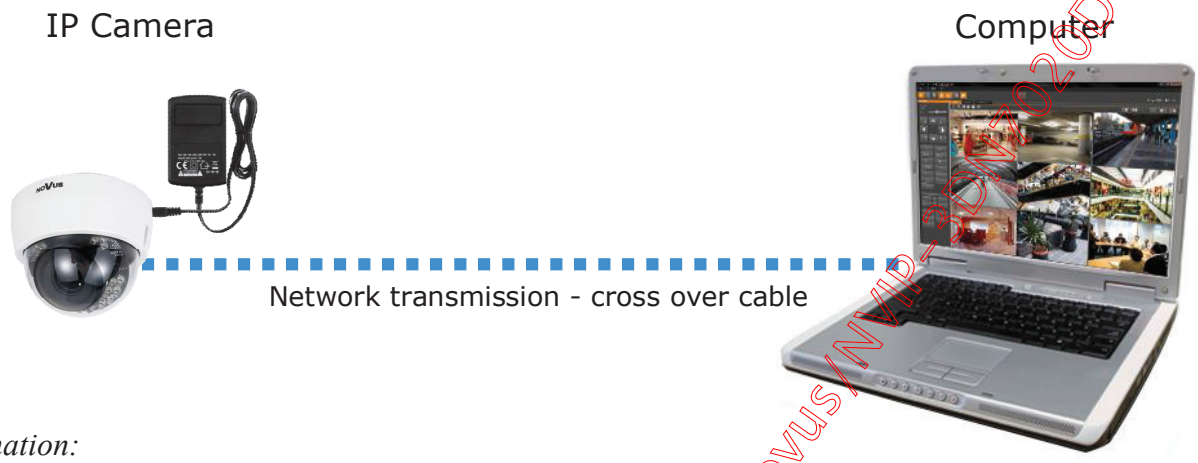
START-UP AND INITIAL CAMERA CONFIGURATION

- Connection utilising external power supply directly to the computer



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Information:

Power supply adapter is not included. Please use power adapter with parameters specified in user's manual.

Caution:

In order to provide protection against voltage surges/lightning strikes, usage of appropriate surge protectors is advised. Any damages resulting from surges are not eligible for service repairs.

2.4. Initial configuration via the web browser

The default network settings for NVIP-3DN... IP camera series are :

1. IP address= **192.168.1.200**
2. Network mask - **255.255.255.0**
3. Gateway - **192.168.1.1**
4. User name - **root**
5. Password - **pass**

Knowing the camera's IP address you need to appropriately set PC IP address, so the two devices can operate in one network subnet (e.g. for IP 192.168.1.1, appropriate address for the camera ranges from 192.168.1.2 to 192.168.1.254, for example 192.168.1.60). It is not allowed to set the same addresses for camera and PC computer

You can either set a network configuration (IP address, gateway, net mask, etc.) of NOVUS IP camera yourself or select DHCP mode (DHCP server is required in this method in target network) by using web browser or by NMS software. When you use DHCP server check IP address lease and its linking with camera MAC address to avoid changing or losing IP address during device operation or network/ DHCP server breakdown. You have to remember to use a new camera IP address after changing network parameters.

After network setting configuration has been done, the camera can be connected to a target network.

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3. NETWORK CONNECTION UTILIZING WEB BROSWER

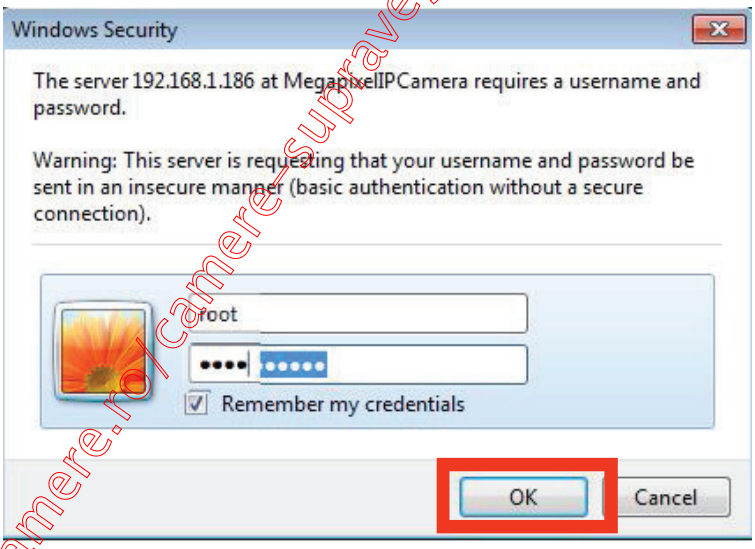
3.1. Recommended PC specification for web browser connections

Requirements below apply to connection with an IP camera, assuming smooth image display in 1920x1080 resolution and 25 fps speed.

1. CPU **Intel Pentium IV 3 GHz** or newer
2. **RAM** Memory min. **512 MB**
3. VGA card (any displaying **Direct 3D with min. 128 MB RAM** memory)
4. OS **Windows XP / VISTA**
5. **Direct X** version **9.0** or newer
6. Network card **10/100/1000 Mb/s**

3.2. Connection with IP camera via the Internet Explorer

You have to enter camera IP address in the Internet Explorer address bar. If IP address is correct user login window will be displayed:


Windows Security
The server 192.168.1.186 at MegapixelIPCamera requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
root
Remember my credentials
OK
Cancel

Default user is **root** and default password is **pass.**

For safety reasons, it is recommended to change default user name and password.

When you log on to the camera, web browser will download the applet for displaying images from the camera. Depending on the current Internet Explorer security settings it may be necessary to accept an ActiveX control. To do this, click the right mouse button on the message, select "Install Active X control" and then click Install. After successfully NVIP Viewer plug in downloading run and install it on a computer.

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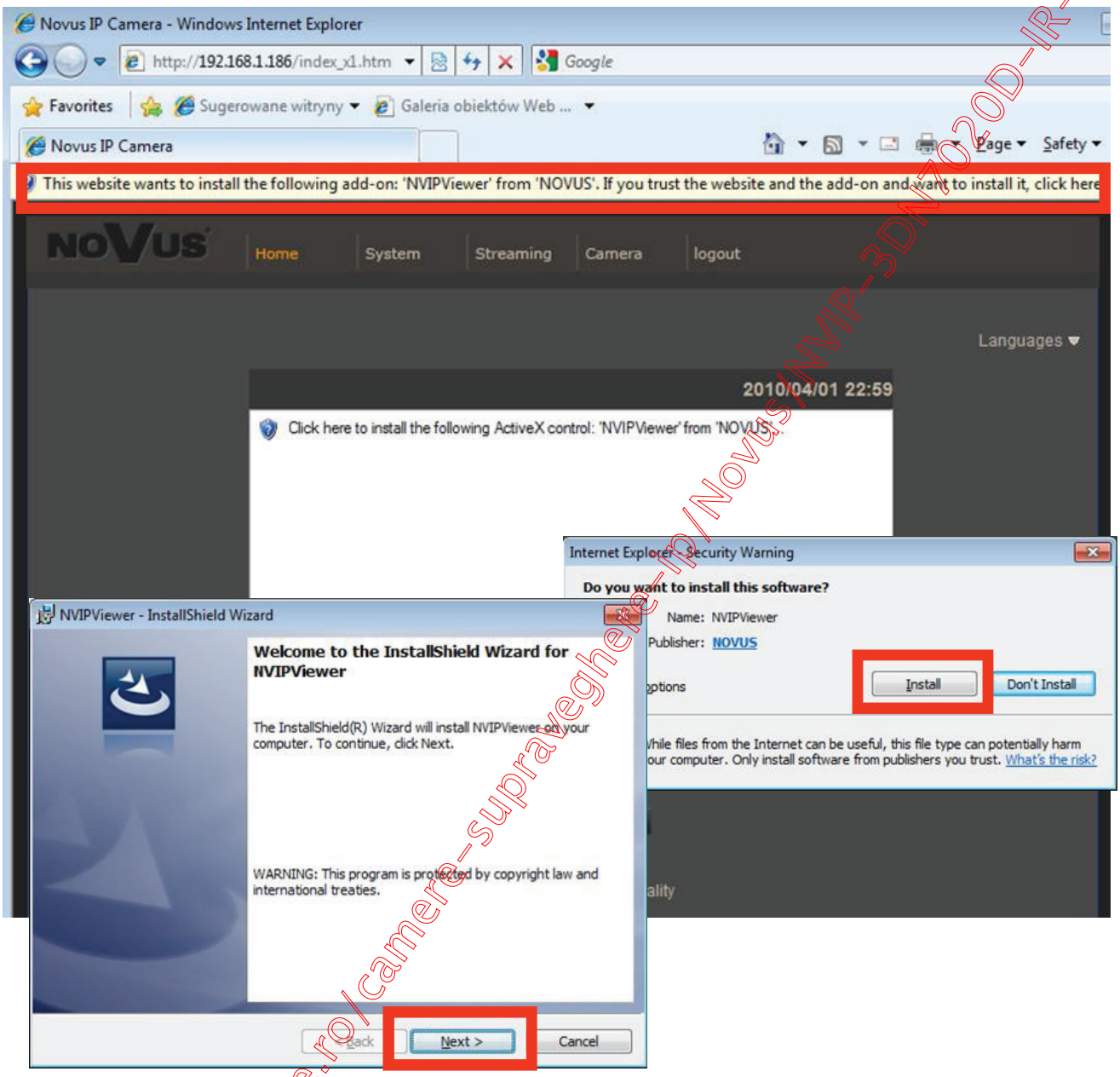
NETWORK CONNECTION UTILIZING WEB BROWSER



If the installation fails, changing security settings for the IE browser is required. In order to do that, please choose: *Tools* > *Internet options* > *Security tab* > *Custom level* and:

- Under *Download unsigned ActiveX controls* - select either Enable or Prompt
- Under *Initialize and script ActiveX controls not marked as safe* - select Enable or Prompt

You can also add the camera's IP address to "*trusted zone"* and set lowest security level for it.

In addition, when working in Windows Vista/7 the ActiveX applet may be blocked by Windows Defender or User account control. In such case you should allow to run this applet, or simply disable

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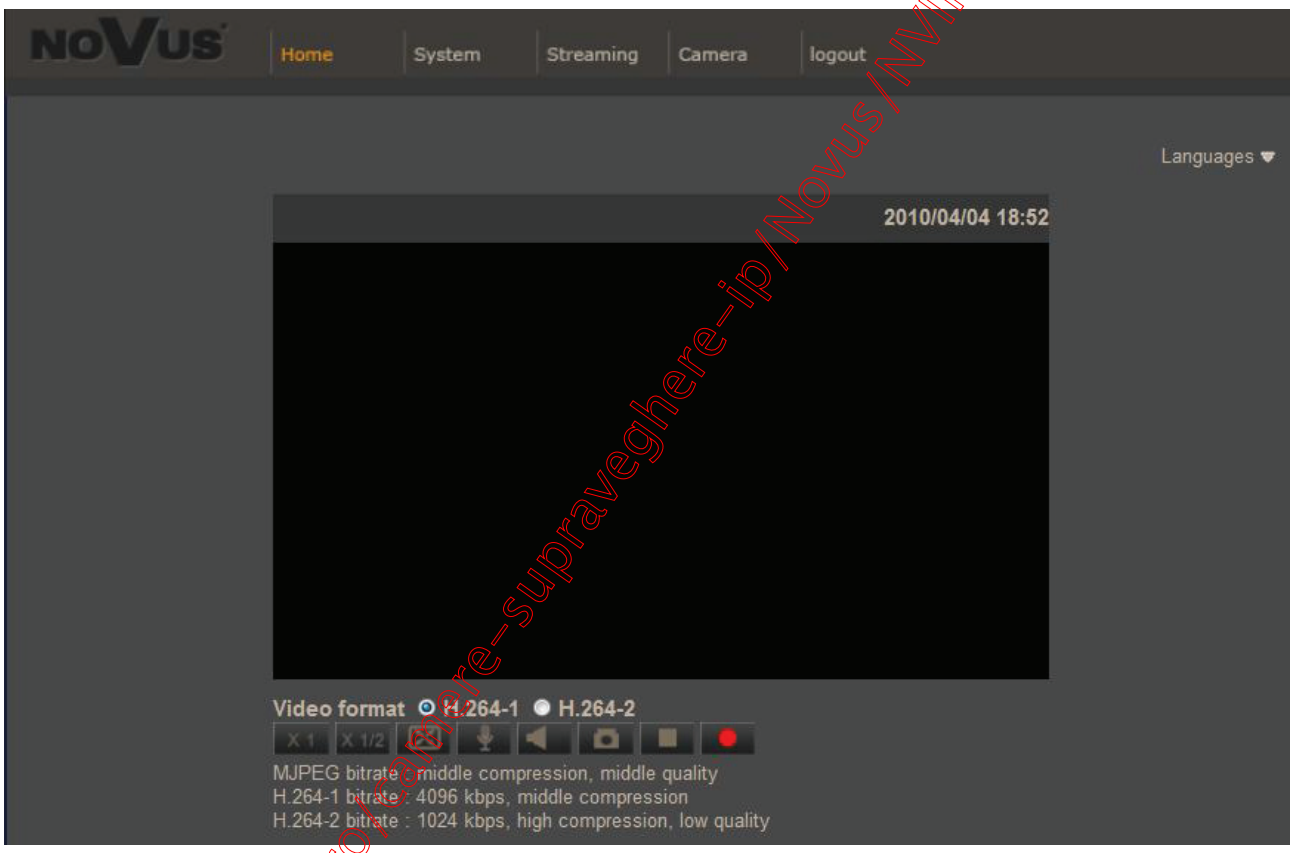
NETWORK CONNECTION UTILIZING WEB BROWSER

3.3. Connection with IP camera via other browser eg. Chrome, Mozilla Firefox, Safari)

It is also possible to connect to the camera using Mozilla Firefox, but this browser doesn't offer full functionality of the camera, so the recommended browser is Internet Explorer.

The first run of the IP camera in browser is very similar to the IE version. After you type the correct IP address you have to write correct username and password. The default user is **root** and password is **pass**.



Next, blank screen is displayed. Then you have to install the missing Quick Time plug-in from site:

http://www.apple.com/quicktime/download/

http://www.e-camere.ro/camere-supraveghere-ip/Novus/NVIP-3DN7020D-IR-2P

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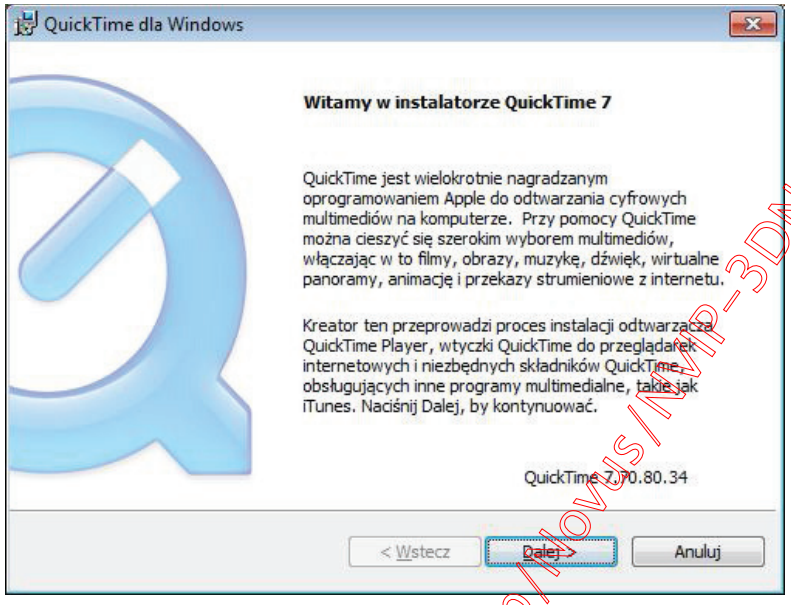
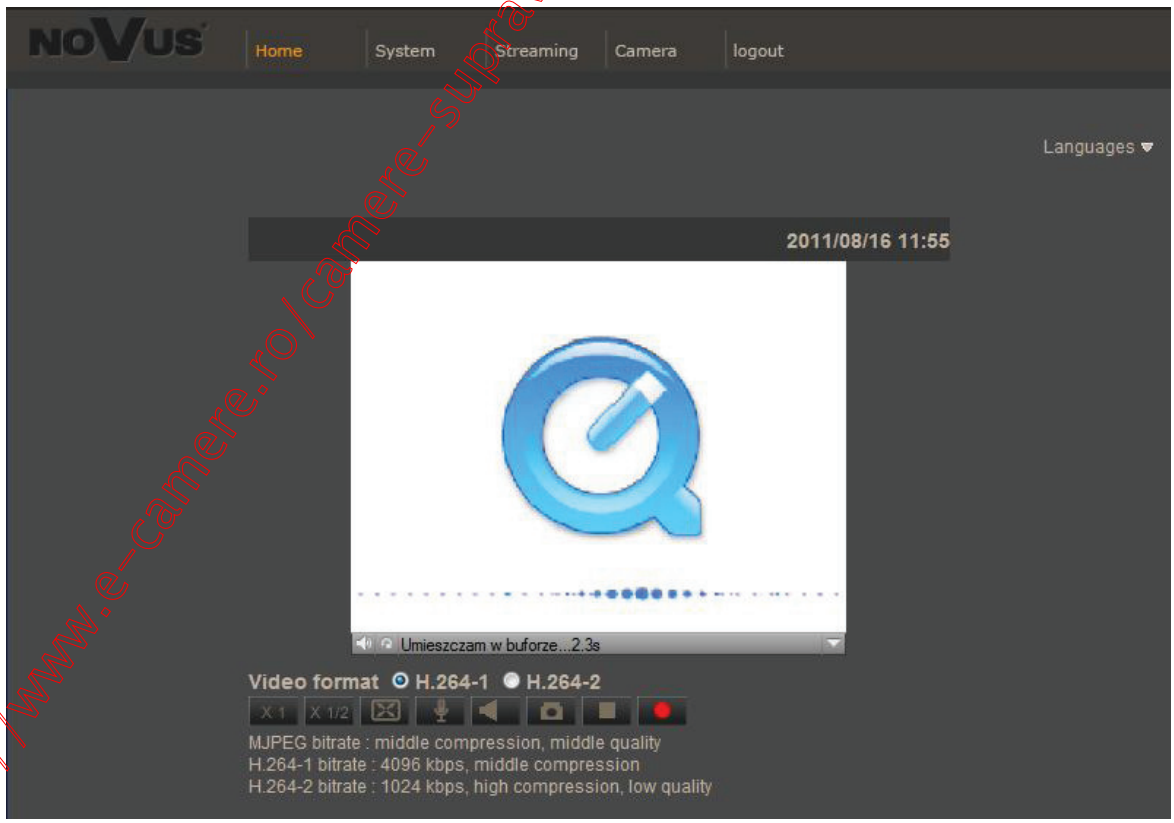
NETWORK CONNECTION UTILIZING WEB BROWSER


QuickTime dla Windows
Witamy w instalatorze QuickTime 7
QuickTime jest wielokrotnie nagradzanym oprogramowaniem Apple do odtwarzania cyfrowych multimediów na komputerze. Przy pomocy QuickTime można cieszyć się szerokim wyborem multimediów, włączając w to filmy, obrazy, muzykę, dźwięk, wirtualne panoramy, animację i przekazy strumieniowe z internetu.
Kreator ten przeprowadzi proces instalacji odtwarzacza QuickTime Player, wtyczki QuickTime do przeglądarek internetowych i niezbędnych składników QuickTime, obsługujących inne programy multimedialne, takie jak iTunes. Naciśnij Dalej, by kontynuować.
QuickTime 7.70.80.34
< Wstecz
Dalej >
Anuluj

After downloading and running it, a window depicting installation of particular components is then displayed. After proper installation pictures from the camera should become visible



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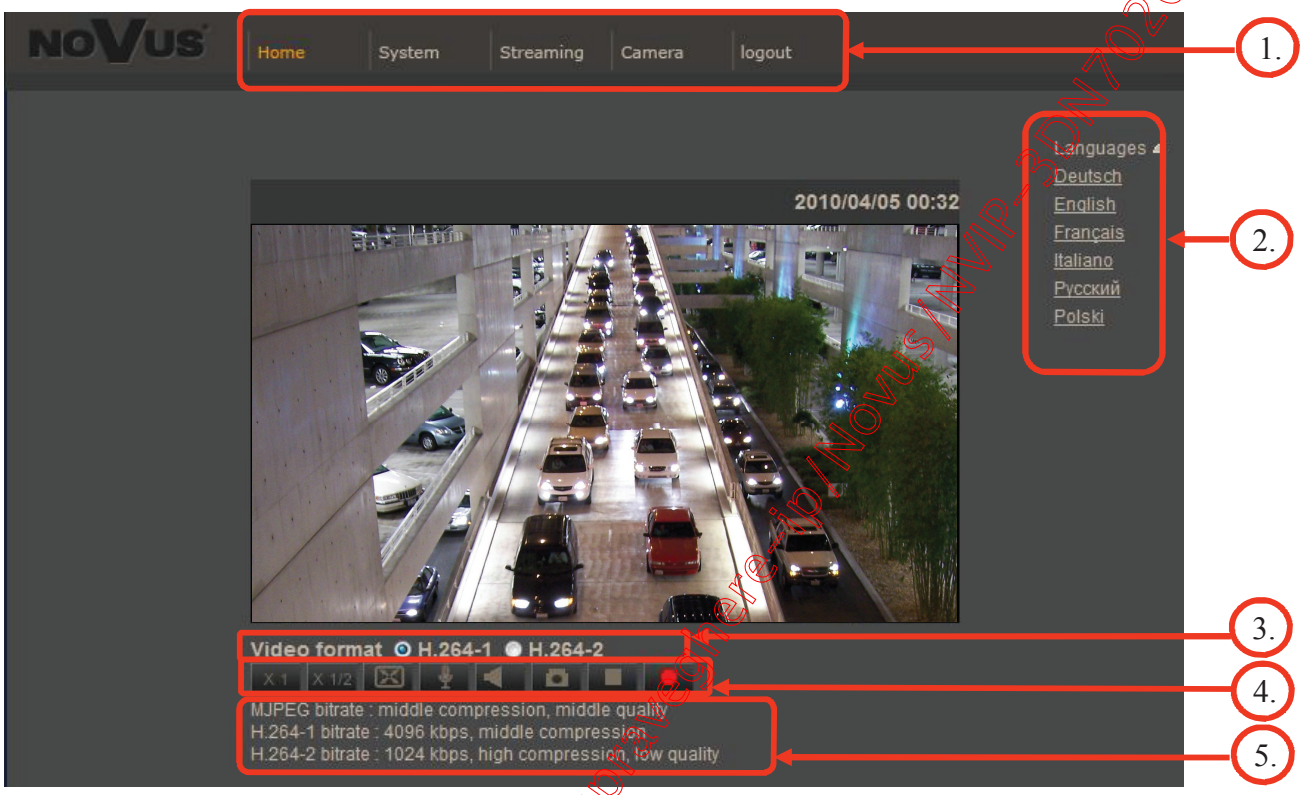
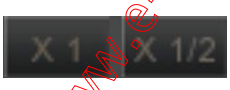
4. WWW INTERFACE - WORKING WITH IP CAMERA

4.1. Displaying live pictures

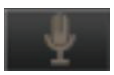


1. Main tabs
   - Home — live view page
   - System — camera settings (IP, recording, sending alarm messages, motion detection)
   - Streaming — streaming settings for audio and video audio
   - Camera — picture settings
   - Logout
2. Language selection.
3. Video stream selection.
4. ActiveX settings for live video.



- Display mode in web browser

- Full screen view



- Microphone - enable audio from microphone

- Speaker - enable audio sending to the camera

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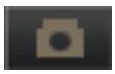
WWW INTERFACE - WORKING WITH IP CAMERA



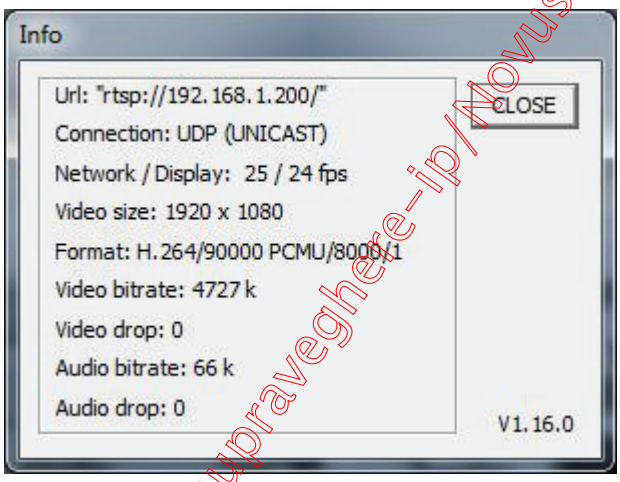
- Snapshot - saves the current frame in JPEG format

- Video Streaming pause/play button

- Web recording to AVI button

5. Video streaming information.

Right mouse button click on the live screen view displays additional information about actual video and audio transition parameters.



http://www.e-camere.ro/camere-supraveghere-ip/Novus/NVIP-3DN7020D-IR-2P

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5. ELECTRIC CONNECTORS AND ACCESORIES

5.1. Connecting power supply to the camera.

The camera is supplied by using RJ45 network socket (connected using power terminal block, as described in 2.1 chapter). To run NOVUS IP camera you have to connect ethernet cable between camera and network switch with PoE support (IEEE 802.3af). You can also use a power injector compatible with IEEE 802.3af standard.

Information: Power supply adapter is not included.

Caution:
In order to provide protection against voltage surges/lightning strikes, usage of appropriate surge protectors is advised. Any damages resulting from surges are not eligible for service repairs.

5.2. Connecting alarm and audio inputs/outputs.

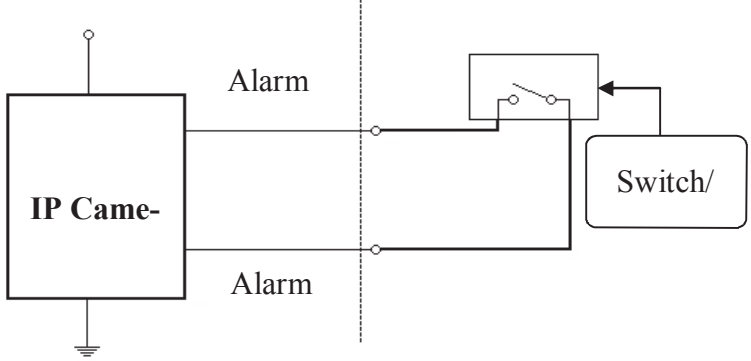
- Description of input/output connector terminal is presented in the table below:

Pin	Definition	Description
1	Alarm input -	Alarm connection
2	Alarm input +	
3	Alarm output -	
4	Alarm output +	
5	Audio output (L)	Audio line out
6	Audio output (R)	
7	GND	Ground
8	Audio input	Audio line in

- Input and output connector states:

Alarm input	Normal state	5V	-
	Active state	0V	I<0,2mA
Alarm output	Normal state	No connected (R=∞)	-
	Active state	Conected (R=30Ω)	0.1A, 30VDC/AC

- Alarm input connections



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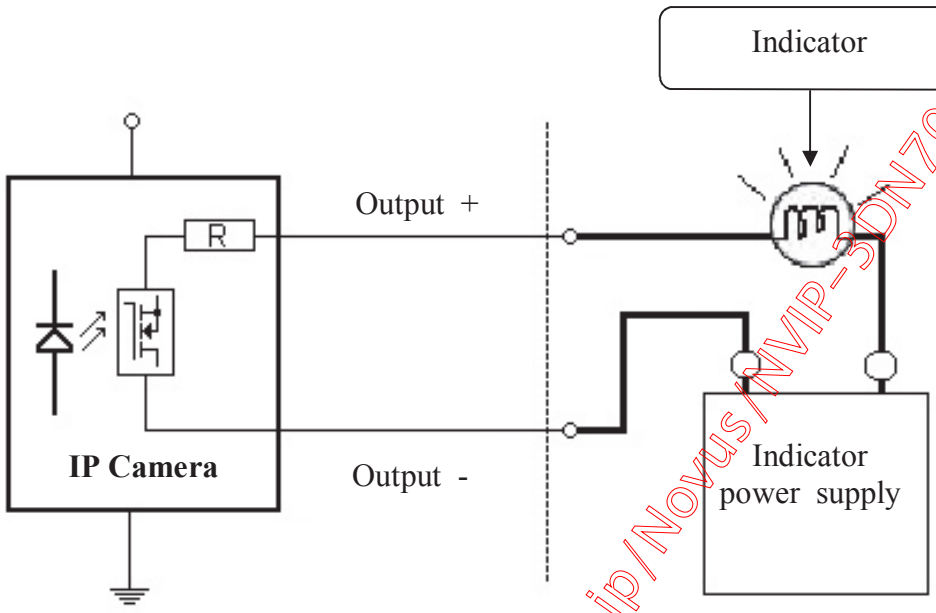
ELECTRIC CONNECTORS AND ACCESORIES

- Alarm output electric connections



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5.3. SD card installation

Camera supports SD and SDHC cards with their capacity up to 16GB. In order to install the card properly, please follow the instructions below:

- Format the card in FAT32 file system using a PC computer
- Turn the camera off
- Mount SD card in the socket located at the camera's rear, according to the picture:
- Turn the camera on
- Check the SD card by checking its capacity in the *STORAGE MANAGEMENT* tab.

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6. RESTORING FACTORY DEFAULTS

NOVUS IP cameras allow to restore defaults via:

- software (web browser level) resetting the camera settings
- hardware (using reset) restores factory defaults.

6.1. Restoring software factory defaults

Factory software default restores default settings of the IP camera except network settings. The camera re-starts then, taking about one minute to complete. Option to restore the factory default is described in *SETUP>FACTORY DEFAULT* tab.

Then log on after approx. 1 minute using default IP address (http://192.168.1.200) and default user name (root) and password (pass)

NOTICE:

It is possible to save current network settings.

6.2. Restoring hardware factory defaults in IP cameras

In order to restore factory defaults for the camera please follow the instructions:

- press the *RESET* button and hold on for 20 seconds
- release button
- log on after approx. 1 minute using default IP address (http://192.168.1.200) and default user name (root) and password (pass)

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